

Dombi, J.

HUNGARY/Optics - Luminescence

K-6

Abs Jour : Ref Zhur - Fizika, No 6, 1958, No 14233

Author : Dombi J., Horvai K.

Inst : The University, Szeged, Hungary

Title : On the Concentration Dependence of the Effect of Secondary
Fluorescence on the Spectra

Orig Pub : Acta phys. et chem. Szeged, 1956, 2, No 1-4, 9-17

Abstract : Using a photoelectric spectrophotometer, the authors have investigated the changes in the radiation spectra of fluorescein in water (pH = 12.5). When the concentration of the fluorescence changes, a shift in the radiation spectrum is observed, in spite of introducing corrections for the reabsorption. The authors ascribe this shift to the influence of the secondary fluorescence. The fluorescence spectrum, corrected also for secondary fluorescence by the method of Budo and Keteskemety (Referat Zhur Fizika, 1957, No 6, 15545), is independent of the concentration over a wide range (2×10^{-5} to 10^{-2} m/l).

Card : 1/1

39

DOMBI, J.

HUNGARY/Optics - Luminescence

K-6

Abs Jour : Ref Zhar - Fizika, No 6, 1958, No 14238

Author : Budo A., Dombi J., Szollosy L.

Inst : The University, Szeged, Hungary

Title : Determination of the Absolute Quantum Yield of Fluorescent Solutions.

Orig Pub : Acta phys. et chem. Szeged, 1956, 2, No 1-4, 18-27

Abstract : The authors have investigated theoretically and experimentally the problem of the influence of secondary fluorescence on the determination of the absolute quantum yield of luminescence. A method is developed for calculating the true quantum yield with allowance for the secondary glow. Measurements of the concentration extinction of fluorescein in an aqueous alkaline solution, made on the basis of this method, have shown that the values of the quantum yields, obtained without accounting for the secondary fluorescence, are considerably greater than the true ones (may even exceed unity).

Card : 1/1

J. Dombl

Instr: 4E3d

The spectral influence of secondary fluorescence. J. Budo, J. Dombl, and R. Horvai (Univ. Szeged, Hung.). *Acta Univ. Szegedi Sect. Acta Phys. et Chem. (N.S.)* 3: 3-15 (1957) (in German).—The differences, which arise solely due to the observational method in the case of primary fluorescence spectra, are nonexistent in the case of the quant. research including the effect of the secondary fluorescence spectra (at least for fluorescein solns.). Measurements were made for (1) longitudinal measurement on the middle of the front plane, (2) the same on the back plane, and (3) transverse measurements, each at 430 and 490 m μ . The max. divergence of the direct measured quantum spectra for $\lambda = 520-600$ m μ was in the range 11-33%; for that only concerned with the reabsorption cor. spectra the max. divergence was 1.8-25%; and for that also cor. for the secondary fluorescence only 1.4-5.0%, i.e., the last divergence lies within the probable error ($\pm 3\%$) of the method. By varying the concn. and the layer thickness, the agreement was less good, but in all cases it was better than when just the influence of the reabsorption was considered. The mathematics for calcg. the different cases is included.

Marian C. Neumann

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Dombi, J.

Simple experimental method to determine the intensity of secondary fluorescence. J. Dombi, J. Hevesi, and R. Horvai (*Univ. Szeged, Hung.*) *Acta Univ. Szegediensis, Acta Phys. et Chem.*, 5, 20-5 (1950) (in German).—The intensity ratio α of secondary to primary fluorescence can be approx. calcd. by the equation $B = E_0 (1 - e^{-\alpha}) (1 - \epsilon^*)^{-1}$, where B is the observed intensity, E_0 is the incident-light intensity, ϵ is the quantum efficiency, α is the product of the absorption coeff. and the cell length, and $\epsilon^* = \alpha(3 - \rho_p)(3 - \rho_s)^{-1}$, in which ρ_p and ρ_s are the degrees of polarization of the primary and secondary fluorescence, resp. The values of α calcd. in this way gave good agreement with the exptl. values for fluorescein, rhodamine B, trypanamine, and Al morin over a 100-fold range in concn., beginning at $5.0 \times 10^{-4} M$.
John A. Borisyuk

5

KETSKEMETY, I.; DOMBL, J.; HORVAI, R.

The connection of the absorption fluorescence spectra of solutions.
Preliminary report. Acta phys Hung 12 no.3:263-267 '60. (EEAI 10:5)

1. Institute for Experimental Physics, University of Szeged, Szeged.
(Fluorescence) (Spectrum analysis)

KETSKEMETY, L.; DOMBI, J.; HORVAI, R.

Fluorescence, absorption and temperature radiation of solutions.
Acta phys Hung 14, no.2 3:165-166 '62.

1. Institute of Experimental Physics, The University, Szeged.
Presented by G. Szigeti [Gyorgy Szigeti]

DOMBI, J.; KETSKEMETY, I.; KOZMA, L.

An analytic interpretation of absorption and fluorescence spectra of solutions. Acta phys chem Szeged 10 no.1/2:15-22 '64.

1. Institut für Experimentalphysik der Attila József Universität, Szeged.

L 61670-65 EWT (1) P1-4 I (c)
ACCESSION NR AP501112 UR/0051/65/018/004/0710/0711
AUTHORS: Bombi, V. (Bombi, J.); Kechkemeti, L. (Ketskemety, L.)
TITLE: Contour of spectra of fluorescent solutions
SOURCE: Optika i spektroskopiya, v. 18, no. 4, 1965, 710-711
TOPIC TAGS: Fluorescent solution, absorption spectrum, emission spectrum, organic dye
ABSTRACT: Expressions are written out for the absorption and emission spectra of fluorescent solutions, on the basis of the experimentally demonstrated fact that the connection between them can be simultaneously characterized by at least an approximate mirror symmetry and by a modified Stepanov relationship (DAN SSSR v. 112, 839, 1957 and elsewhere), as shown by the authors in an earlier paper (Anal. Phys. v. 7, 343, 1961). These formulas

Card 1/2

D 61670-65

ACCESSION N^O: AP5011128

involve a symmetrical function of the frequency difference, the experimental values of which do not agree with the theory because of the approximate nature of the assumptions. The authors then report briefly on the experimental values of these functions obtained for tripaflavine, eosin, rhoduline orange, Al-morin, fluorescein, rhodamine B, esculin, and Bengal rose, and compare the results of the theoretical values. A detailed report will be published in Acta Phys. et Chem. Szeged. Original article has 2 figures and 2 formulas.

ASSOCIATION: Department of Experimental Physics, Szeged University, Hungary

SUBMITTED: 08Apr64

ENCL: 00 SUE CODE: OP

NR REF SOV: 002

OTHER: 000

llc
Card 2/2

		M
Country	: USSR	
Category	: CULTIVATED PLANTS. FRUITS. Berries.	
Abs. Jour.	: REF ZHUR-BIOL., 21, 1958, NO. 96156	
Author	: Dombkovskaya, Ya. A.	
Institut.	: All-Union Sci. Res. Inst. of Wine-Making and Viti-	*
Title	: Cultivating European Grape Varieties on Cold Resis- tent Stocks in the Suburbs of Moscow	
Orig. Pub.	: Byul. nauchno-tekhn. inform. Vses. n.-i. in-t vinodeliya i vinozaderstva, 1957, No. 2, 39-41	
Abstract	: Grape varieties are promising for cultivation in the suburbs of Moscow which yield mature berries in 100-110 days of vegetation with a sum of heat of 1800-1900°. When introduced European early grape varieties were grafted on native vines of cold resistant stocks growth was boosted together with the degree of shoot ripening.	
	*culture	
Card:	1/1	

DOMBKOVSKAYA, Ye.P.; PESHKOVA, I.I.

Analysis of conditions promoting considerable rainfall⁶ during
the passage of cold fronts over central areas of the European
part of the U.S.S.R. in the warm part of the year. Sbor. rab.
po siro. no.5:32-41 '60. (MIRA 14:8)

1. Управление гидрометеорологической службы центральных
областей Европейской территории СССР.
(Rain and rainfall)

VETLOV, I.P., kand.fiz.-matem.nauk; GAYEVSKIY, V.I., kand.fiz.-matem.nauk;
GUSEVA, I.N.; DUMBKOVSKAYA, Ye.P.; KONDRAT'YEV, K.Z., prof.;
NORDBERG, V. [REDACTED] (Soyedinennyye Shtaty Ameriki); TER-MARKARYANTS,
N.Ye., kand.fiz.-matem.nauk

Experience in the analysis of the infrared image of cloud cover
obtained by means of the "Nimbus-1" meteorological satellite.
Meteor. i gidrol. no.9:20-26 S '65.

(MIRA 18:8)

1. Glavmaya geofizicheskaya observatoriya; Leningradskiy gosudarstvennyy universitet i Mirovoy meteorologicheskiy tsentr.

FEHER, Istvan, dr., Kossuth-dijas; WEITZNER, Peter; DOMOS, Istvan; NAGY, Jozsefme;
ERDI, Pal, dr.; KOVACS, Gabor; ARVAI, Bola; TOTH, Gena, dr.; DOMBOS,
Laszlo.

The 1964 general meeting arranged by the Scientific Association of
the Leather Industry. Bor cipo 14 no.4:97-99 Jl '64.

1. Director, Research Institute of the Leather Industry; Editor-in-Chief, "Bor- és Cipotechnika" (for Feher). 2. Secretary General, Scientific Association of the Leather Industry (for Weitzner). 3. Minister of Light Industry, Budapest (for Nagy). 4. Editorial board member, "Bor- és Cipotechnika" (for Erdi). 5. Szombathely Shoe Factory (for Kovacs and Arvai). 6. Leather Industry Enterprise (for Toth). 7. Tisza Shoe Factory (for Dombos).

DOMBOVARI, Janos

Data on the movement of nitrate and ammonia in irrigated soil.
Agrokem tanajtan 9 no.2:201-212 '60.

1. Ontozesi es Rizstermesztesi Kutato Intezet, Szarvas.

DOMBOVARI, Janos

Data on the phosphorus and water supply of alfalfa. Agrokom
talajtan 12 no.4:555-564 D '63.

1. Research Institute of Irrigation and Rice Growing,
Szarvas.

DOMBRACHOVA, Ya. I.; KOZLOV, A. M.; KRICHINSKIY, M. Ye.; LAPITSKIY, N. A.;
LISTOVSKIY, N. D.; IUKANOV, M. A.; MANUKOV, N. P.; MICHURINA, V. V.;
POLYACHENKO, A. V.; TIMOFEEV, N. A.; TSVETKOV, V. S.; CHISTYAKOV,
V. D.; KOPRYKIN, P. A., inzh., red.; KRYUKOV, V. L., red.; KOBILYAKOV,
L. M., red.; ZUBRELLINA, N. P., tekhn. red.

[Practices in tractor repair] Opyt remonta traktorov. Moscow, Gos.
izd-vo sel'khoz. lit-ry, 1958. 301 p. (MIRA 11:7)
(Tractors—Maintenance and repair)

FOLDEAK, S.; DOMBRADI, G.A.

Tumor-growth inhibiting substances of plant origin. Pt.1.
Acta phys chem Szeged 10 no.3/4:91-93 '64.

1. Department of Organic Chemistry of Attila Jozsef University,
Szeged (for Foldeak). 2. Institute of Physiology of Szeged
Medical University (for Dombradi).

~~DOMBRADI, G.; KARADY, I.~~

The effect of endogenous corticoids on wound healing in rats. *Biochemistry*.
vener. szemle 7 no.3:79-84 May 1953. (CIML 25:1)

1. Institute of Pathophysiology (Director --- Prof. Dr. Istvan Karady),
Szeged Medical University.

DOMBRADI, Geza; KRIZSA, Ferenc; JANCSO, Tamas

Effect of extracts from the posterior lobe on water reabsorption
by the small intestine. Kiserletes Orvostudomany 12 no.1:5-9
F '60.

1. Szegedi Orvostudomanyi Egyetem Elettani Intezete.
(PITUITARY GLAND POSTERIOR extracts)
(INTESTINE SMALL physiol)
(MATER metab.)

SZORADY, Istvan; KOLTAY, Miklos; DOMBRADI, Geza; TAKACS, Odon

Studies on electrolytes in artificial hibernation. Kiserletes
orvostud. 13 no.4:337-344 Ag '61.

1. Szegedi Orvostudomanyi Egyetem Gyermekklinikaja es Elettani
Intezete.

(HIBERNATION ARTIFICIAL metab) (ELECTROLYTES metab)

DOMBADI, G.A.; KRIZSA, P.; JANCZO, T.

Kinetics of intestinal water absorption in rats under the influence
of ADH. Acta physiol.hung. 17 no.3:301-308 '60.

I. Physiologisches Institut der Medizinischen Universität, Szeged.
(VASOPRESSIN pharmacol)
(INTESTINES physiol)
(WATER metab.)

DOMBRADI, G.A.; KRIZSA, F.; JANCZO, T.; OBAL, F.

Analysis of intestinal absorption changes caused by posterior pituitary extracts in animals after the preliminary treatment with cortical hormones. Acta physiol.hung. 18 no.3:203-209 '60.

1. Physiologisches Institut der Medizinischen Universitat, Szeged.
(PITUITARY GLAND POSTERIOR hormones)
(ADRENAL CORTEX HORMONES pharmacol)
(INTESTINES physiol)
(WATER metab)

HUNGARY

DOMBRADI, Geza; Medical University of Szeged, Institute of Physiology (Szegedi Orvostudomanyi Egyetem, Elettani Intezet).

"Investigation of the Succinotranshydrogenase-Inhibitory Effect of Cytostatica."

Budapest, Kiserletes Orvostudomany, Vol XV, No 5, Oct 63, pages 503-507.

Abstract: [Author's Hungarian summary] A method has been developed for the routine, *in vitro* testing of cytostatic effects. The simple, quantitative method is based on the inhibition of succinotranshydrogenase. The dimensions of the experimental setup were:

$$[\frac{1000 \mu\text{c}/10\text{ml}}{\text{ml}}]^{+4^\circ\text{C}}$$

Of the six standard compounds tested, nitrogen mustard, 6-mercaptopurine and sodium arsenite had inhibitory properties. Endoxan, TEPA and Degranol gave negative results. The limitations and possibilities of a routine, serial use of this method are discussed. 4 Hungarian, 13 Western references.

1/1

L 15508-66

ACC NR: AT6007479

SOURCE CODE: HU/2505/65/026/00X/0067/0067

20

B+1

AUTHOR: Dombradi, G.; Csanyi, Irene; Domjan, Gy.

ORG: Department of Physiology and Biochemistry, Medical University of Szeged
(Szegedi Orvostudomanyi Egyetem, Elettani es Biokemiai Intezet)

TITLE: Analysis of changes in the activation energy of succinate dehydrogenase under the influence of some antitumor agents. This paper was presented at the 29th Meeting of the Hungarian Physiological Society held in Szeged from 2 to 4 July 1964

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, Supplement, 1965, 67

TOPIC TAGS: enzyme, tumor, alkylation, drug effect, pharmacology

ABSTRACT:

The changes in the activation energy of succinate dehydrogenase have been studied under the action of certain antitumor agents. The following conclusions have been arrived at.
1) A cytostatic effect does not necessarily involve changes in the activation energy of the enzyme. 2) Substances which are capable of exerting an inhibitory effect lead to a decrease in the activation energy of the same magnitude. 3) Inhibition only occurs at physiological and near-physiological temperatures. The relationship between enzyme inhibition and the decrease in the

Card 1/2

L 15508-66.

ACC NR: AT6007479

activation energy was discussed on the basis of the current concept of enzyme-substrate combination in compliance with the process of alkylation taking place at the molecular level. [JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 2/2

DOMBRADY, L.

DOMBRADY, Ladislav, MUDr.

Prosthetic indications in root canal therapy. Prakt. zub. lek.,
Praha 2 no.8:184-187 1954.

1. II. stomatol klinika, Praha
(ROOT CANAL THERAPY
prosthetic indic.)
(DENTAL PROSTHESIS
in root canal ther., indic.)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5

DOMBRADY, L.

MICHAL, P. Doc.MUDr; DOMBRADY, L. MUDr

Epithesis in extensive facial defects. Cesk.stomat. no.4-5:
160-165 J1 '55.

1. Predn.ochniho oddel.mocnice na Bulovce,(for Michal). 2.
Z II stomatologické kliniky KU v Praze, predn. prof. dr. F.
Neuwirt. Ing. arch. V.Sedivy(for Dombrady)
(FACE, surgery,
plastic)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5"

DOMBROVSKA-GAVDA, H. [Dabrowska-Gawda, H.]; RAFALOVICH, E. [Rafalowicz, E.];
SULKOWSKI, Ch. [Sulkowski, Ch.]

Measurement of the specific strength of threadlike single crystals
(whiskers) of copper depending on temperature. Acta physical Pol
23 no.6:663-672 Je '63.

1. Kriogennaya Laboratoriya Polskoy Akademii Nauk, Vrotslav.

DOPENOVSKAYA, A.M.

Pharmacology of Schisandra chinensis preparations. Vopr. fiziol.
no.9:174-186 '54. (MIRA 14:1)

1. Kiyevskiy meditsinskiy institut, kafedra farmakologii.
(PLANTS,
Schisandra chinensis, pharmacol.)

DOMBROVSKA, A.M.

1. Pharmacology of hypotensive substances. A. V. Dombrovska, V. A. Krementsova, and O. I. Cherkas (A. A. Bogomolets Med. Inst., Kiev). *Fiziol. Zhur., Akad. Nauk Ukr. R.S.R.* 1, No. 4, 80-7 (1955) (Russian summary, 88-9).—The pharmacologic properties of hexamethonium iodide are studied. The subcutaneous L.D.₅₀ is 240 mg./kg., L.D.₄₀ = 175 mg./kg., and M.L.D. = 100 mg./kg. The intravenous L.D.₅₀ is 100 mg./kg., L.D.₄₀ = 65 mg./kg., and M.L.D. = 40 mg./kg. The compd. exerts hypotensive effects on dogs and cats, the intensity and duration depending upon the method of administration, the size of the dose, and the physiol. idiosyncrasies of the individual animal. In the early stages (2-4 months) of exptl. reflex (type of hypertension), the compd. produces effect lasting 1-1.5 months. It is concluded that the hypotensive properties are caused by the blocking of sympathetic channels. In addn., the compd. exerts an inhibitive effect on neurotransmission and on the parasympathetic nodes of the vegetative branch of the nervous system. The compd. has no effect on the peripheral or adrenoreactive vascular systems. Toxic doses of the compd. exhibit curare-like effects in warm-blooded animals. In cold-blooded animals such effects become evident with much smaller doses. The drug inhibits nerve-impulse transmission in the sympathetic and parasympathetic ganglia and lowers the blood pressure in normal cats and rabbits after a single dose. B. S. Leyte

(2)

DOMEROVSKAYA, A. M., KREMENTULU, V. A., STANKEVICH, V. V., AND CHERKES, A. I., Kiev

"Experimental Investigations of the Pharmacology of Hypotensive Drugs,"
a paper presented at the Fifth Conference of the Ukrainian Society of Physiologists, Biochemists, and Pharmacologists, 28 May-2 June 1956, Khar'kov.

"The paper dwelt on the main pharmacological properties of certain derivatives of the methonium series. In experiments on cats, the preparations exhibited ganglioblocking action; while in acute experiments on rabbits the drugs under investigation caused a drop in blood pressure, the result of their blocking action on the sympathetic ganglia. In chronic experiments on rabbits suffering from experimental reflexogenic hypertension the hypotensive action of hexatonide continued for 1.5 months. Hexatonide was also effective in renal hypertension. The addition of the benzoin radical to the hexamethonium radical not only prolonged the hypotensive action of the preparation, but also increased its toxicity."

CHERKES, A.I., prof.; DOMBROVSKAYA, A.M.; KREMINIULO, V.A.

Experimental studies on the pharmacology of agents for regulating
vascular tonus. Vrach.delo no.1:1247-1249 D '58.

(MIRA 12:3)

1. Kafedra farmakologii (zav. - prof. A.I. Cherkes) Kiievskogo me-
ditsinskogo instituta.
(VASOMOTOR DRUGS)

DOMBROVSKAYA, A.M.; KREMENTULO, V.A.; CHERKES, A.I.

Pirilen is a new ganglion-blocking drug. Vrach. delo no.12:102-107
D '60. (MIRA 14:1)

1. Kafedra farmakologii (zav. - deyestvitel'nyy chlen AMN SSSR, prof.
A.I.Cherkes) Kiyevskogo meditsinskogo instituta.
(AUTONOMIC DRUGS) (PIPERIDINE)

DOMBROVSKAYA, A.N.

Campaign for children's health. Zdrav.Belor. 5 no.12:43-44 D '59.
(MIRA 13:4)

1. Glavnnyy vrach l-y gorodskoy bol'nitsy, g. Minsk.
(MINSK--CHILDREN--HOSPITALS)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5

TRUKHAN, P.T.; POPOVA, A.A.; Prinimali uchastiye: DOMBROVSKAYA, A.R.;
CROSMAN, Z.M.; STROMILO, L.I.; SEGAL', E.M.

Globulin immunization of schoolchildren to prevent infectious hepatitis. Report no.1: Reactions following the introduction of gamma globulin. Zhur. mikrobiol., epid. i immun. 41 no.10; 143-144 '64. (MIRA 18:5)

1. Kiyevskiy institut usovershenstvovaniya vrachey i Sanitarno-epidemiologicheskaya stantsiya Podol'skogo rayona Kiyeva.

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5"

TASHCHUK, K.G.; DOMBROVSKIY, A.V.; FEDOROV, V.S.

Production of stilbazoles based on 2-vinylpyridine and aryl diazonium chlorides. Ukr.khim.zhur. 30 no.5:496-499 '64.

(MIRA 18:4)

1. Chernovitskiy gosudarstvennyy universitet.

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5

NO REF SOV: 000

ENCL: 00

FILE: 00, MT

Card 1/1

OTHER: 000

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5"

DOMBROVSKAYA, Anna Vladimirovna; KORNEVA, Mariya Mikhaylovna;
TYUREMNOV, Sergey Nikolayevich, prof.; KOLOTUSEKIN, V.I.,
red.; VORONIN, K.P., tekhn.red.

[Atlas of plant residues encountered in peat] Atlas rasti-
tel'nykh ostatkov, vstrechaemykh v torfe. Pod red. S.N.
Tyuremnova. Moskva, Gos.energ.izd-vo, 1959. 89 p.

(MIRA 14:2)

(Peat)

DOMEROVSKAYA, A.V.

Effect of some ecologic factors on the distribution and
growth of stem and leaf lichens in the Khibiny Mountains.
Bot. zhur. 48 no.5:742-748 My '63. (MIRA 17:1)

1. Polyarno-al'piyskiy botanicheskiy sad Kol'skogo filiala
AN SSSR, Kirovsk.

DOMBROVSKAYA, A.V.

Distribution of bushy and foliose lichens among the basic
types of vegetation in the Khibiny Mountains. Bot. zhur. 48
no.9:1321-1331 S '63. (MIRA 16:11)

1. Kol'skiy filial AN SSSR.

DOMBROVSKAYA, B.A., (Alma-Ata)

[Laws governing the development of biological thought]
O zakonomernostiakh v razvitiu biologicheskoi mysli.
Alma-Ata, Kazakhskii gos.univ., 1965. 13)p.
(MIRA 18:7)

S/058/61/000/012/013/083
A058/A101

AUTHORS: Dombrovskaya, G.S., Kaipov, D.K., Shubnyy, Yu.K.

TITLE: The resolution of scintillation spectrometers

PERIODICAL: Referativnyy zhurnal. Fizika, no. 12, 1961, 59, abstract 12B115
(Tr. Tashkentsk. konferentsii po mirn. ispol'zovaniyu atomn. ener-
gii, 1959, v. 1, Tashkent, AN UzSSR, 1961, 229 - 236)

TEXT: The effect of the operating conditions of spectrometers on their resolution was investigated. A light-pulse generator was used as the light source. For the Ф3Y-29 (FEU-29) and Ф3Y -35 (FEU-35) there were recorded the characteristics of the dependence of the output amplitude on the voltage between the cathode and the diaphragm, as well as the dependence of the resolution on diaphragm potential. The problem of the optimal crystal thickness for obtaining the best resolution is examined (CsI(Tl) crystal, Zn⁶⁵ source).

[Abstracter's note: Complete translation]

Card 1/1

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35160

S/707/60/003/000/008/013
B125/B102*24.6410*AUTHORS: Dombrovskaya, G. S., Kaipov, D. K., Shubnyy, Yu. K.TITLE: Luminescence spectrometer for examining γ -spectra of radioactive nuclei

SOURCE: Akademiya nauk Kazakhskoy SSR. Institut yadernoy fiziki. Trudy. v. 3, 1960. Vzaimodeystviye vysokoenergichnykh chastits s atomnymi yadrami, 115-123

TEXT: The luminescence spectrometer consists of a scintillator crystal, a photomultiplier and an electrical apparatus for measuring the distribution of the pulses arising. Fig. 1 shows the block diagram of this amplifier, consisting of outlying block (with crystal, photomultiplier, and cathode repeater, circuit see Fig. 2) and principal block (with amplifier, Fig. 3 and differential analyzer, Fig. 4). The linear amplifier operates according to the cascade diagram with negative feedback, has a pass band of 1 Mc/sec and the amplification factor 100. In the pulse-height analyzer a tube of type N6 (L6) serves as integral analyzer with variable boundary level and tubes of the types N8 (L8) and Card 1/4

Luminescence spectrometer for...

S/707/60/003/000/008/013
B125/B102

J9 (L9) as discriminator. The circuit $R_{17}C_{51}$ replaces the non-existent anticoincidence cascade. The current for the electronic circuit is supplied via a stabilized rectifier (300 v; 160 ma). The resolving power of the scintillation spectrometer is very dependent on the quality of the multiplier and its mode of operation. The fluctuation of the amplification factor of the multiplier is affected substantially by the amplification factor of the first cascade. Most of the 49Y-29 (FEU-29) type multipliers investigated exhibit the satisfactory resolving power of 22-26 %. NaI(Tl) and CsI(Tl) crystals set in aluminum were used. Using CsI(Tl) crystals, the resolving power for Hg²⁰³ and Zn⁶⁵ amounts to 27 and 12 %, respectively and to 24 and 10 %, respectively if NaI(Tl) crystals are used. Owing to its satisfactory properties, the γ -spectrometer described in the present paper can be used successfully in nuclear spectroscopy. Further studies of interaction of γ -radiation with matter and of short-lived isotopes by the method of delayed coincidences are planned by the authors. V. Kim is thanked for adjusting the electronic circuit and for recording the spectra. There are 15 figures and 8 references: 4 Soviet and 4 non-Soviet. The four references to English-language publications read as

Card 2/6

Luminescence spectrometer for...

S/707/60/003/000/008/013
B125/B102

follows: R. Cook, Amer. Scient., 45, 3, 245, 1957; R. E. Connaly, Analyt. Chemistry, 28, 12, 1847, 1956; W. Bernard and R. Linden, Nucl., 11, 9, 1953; R. E. Connaly and M. B. Lebout, Analyt. Chemistry, 25, 7, 1095, 1953.

Legend to Fig. 1: Luminescence spectrometer block diagram: (1) scintillator, (2) photomultiplier, (3) linear amplifier, (4) pulse-height analyzer, (5) counting device.

Legend to Fig. 2: Outlying block diagram [Abstracter's note: Owing to their large number the single control elements of the Figs. 2, 3, and 4 cannot be indicated].

Legend to Fig. 3: Linear amplifier circuit

Legend to Fig. 4: Circuit of the single-channel differential pulse-height analyzer

Card 3/6

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5

Luminescence spectrometer for...

S/707/60/003/000/008/013
B125/B102

(For figures see Cards 5/6 and 6/6)

Card 4/6

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5"

4440

207/00

S/181/63/005/001/015/064
B102/B186

AUTHORS: Averkin, A. A., Dombrovskaya, I. G., and Moyzhes, B. Ya.

TITLE: The change in the forbidden band width under pressure

PERIODICAL: Fizika tverdogo tela, v. 5, no. 1; 1963, 96-99

TEXT: The change in the electric conductivity σ and the Hall constant under uniaxial pressure up to 15,000 kg/cm² was measured on p-type PbSe single crystals in a temperature range between 297 and 420°K. The change in the forbidden band width E_g dependent on the pressure was calculated. The carrier concentrations of the specimens studied were between $\sim 10^{17}$ and $\sim 10^{18} \text{ cm}^{-3}$. E_g is calculated from the relation

$$E_g = kT \ln \frac{4X^3(m_1^* m_2^*)^{3/2}}{n_0^2 \gamma (1+\gamma)} \quad \text{where } X = 2\pi kT/h^2, m_1^* \text{ and } m_2^* \text{ are the effective masses of holes and electrons and } \gamma = n_2/n_0, n_0 \text{ is the concentration of}$$

Card 1/2

The change in the forbidden ...

S/181/63/005/001/015/064
B102/B186

the impurity carriers and no that of the minority carriers (electrons).
 $dE_g/dP = -(7.5 \pm 0.5) \cdot 10^{-6} \text{ ev/kg} \cdot \text{cm}^{-2}$ was obtained. At room temperature,
 $E_g = 0.26 - 0.29 \text{ ev}$. At a pressure of $\sim 38,000 \text{ kg/cm}^2$ the forbidden band has completely disappeared. This pressure is close to that calculated by Bridgman ($43,000 \text{ kg/cm}^2$) for the PbSe phase transition. E_g increases with temperature: $dE_g/dT = +6 \cdot 10^{-4} \text{ ev/deg}$. The relative mobility u_1/u_{10} of the majority carriers increases linearly with pressure; u_{10} is the majority carrier mobility at room temperature. The results confirm the relationship between effective carrier mass and forbidden band width which the authors assumed earlier (FTT, 3, 6, 1859, 1961). There are 5 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AS USSR, Leningrad)

SUBMITTED: July 20, 1962

Card 2/2

On thermal conductivity of the system of solid solutions PbTe-PbS.
Ye. D. Devyatko^va, V. V. Tikhonov, N. A. Smirnov.

Change of the electrical properties of PbSe, PbTe, and PbS under
close pressure. A. D. Averkin, A. A. Andreyev, I. G. Dombrovskaya,
B. Ya. Moyzhes, E. D. Nensberg.

Report presented at the 3rd National Conference on Semiconductor Compounds,
Kishinev, 16-21 Sept 1963

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5

CHUDAKOV, K.P., inzh.; DOMBROVSKAYA, I.K., inzh.; BOLDOV, Yu.V., inzh.

Using the method of negative impressions for determining the
wear of machine parts. - Vest.mash. 42 no.1:40-42 Ja '62.

(Mechanical wear--Testing) (MIRA 15:1)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5"

DOMBROVSKAYA, I. K., inzh.

Periods of service and fatigue limits of the basic parts of
open-pit excavators. Sbor. trud. MIST no.39:461-465 '61.
(MIRA 16:4)

1. Moskovskiy inzhenerno-stroitel'nyy institut imeni V. V.
Kuybysheva.

(Excavating machinery—Maintenance and repair)

DOMBROVSKAYA, I.N.

Generalization of a system of convolution type equations for
a semi-infinite interval. Mat.zap.Ural.mat.ob-va UrGu 3 no.2:17-23
'62. (MIRA 19:1)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5

DOMBROVSKAYA, I.N.

Approximate solution of a singular integral equation. Mat.
zap. Ural. mat. ob-na UrQu 4 no.2:38-45 '63 (MIRA 17:8)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5"

L 20030-65
ACCESSION NR:

EWT(d) IJP(c)/AFWL/ESD(dp)
AP5003633

8/01/0/64/001/004/0069/0074

AUTHOR: Dombrovskaya, I. N. (Sverdlovsk); Ivanov, V. K. (Sverdlovsk)

TITLE: Incorrect linear equations and exceptional cases of convolution equations

SOURCE: IZVUZ. Matematika, no. 4, 1964, 69-74

TOPIC TAGS: Integral equation, linear operation, algebra

Abstract: The authors show that certain exceptional cases of integral equations of the convolution type and first-order equations are incorrect in the classical sense and outline a method for their approximate solution. They consider the equation

$$Ax = y \quad (1)$$

where $y \in Y$ is a given element and $x \in X$ an unknown element (X and Y are Hilbert spaces; A is a continuous linear operator from X into Y ; AX is everywhere dense in Y : i.e., $AX = Y$).

The following theorem is proved: In order for problem (1) to be correct according to Fisher, it is necessary and sufficient that operator A be normally solvable.

A method is found for obtaining a quasisolution to (1) in cases more general than previously attempted. The theory developed is used to solve Card 1/2

L 20030-65

ACCESSION NO.: AP5003633

exceptional cases of second-order convolution equations, as well as first-order equations. The method suggested for the solution of equations of the indicated type is effective by virtue of the fact that the problem reduces to the solution of a finite system of algebraic equations, a task which may be performed on a computer. Orig. ext. has 6 formulas.

ASSOCIATION: none

SUBMITTED: 22Apr63

ENCL: 00

SUB CODE: MA

NO REF Sov: 006

OTHER: 002

JPRS

Card 2/2

ACCESSION NR: APL033966

8/01/0/64/000/002/0074/0078

AUTHOR: Dombrovskaya, I. N. (Sverdlovsk)

TITLE: Linear operator equations of first kind

SOURCE: IVUZ. Matematika, no. 2, 1964, 74-78

TOPIC TAGS: linear operator equation, Hilbert space, unstable solution, quasi-solution, uniqueness, existence, linear continuous operator, compact space, minimum attainment

ABSTRACT: The author studies the equations

$$Ax = y \quad (1)$$

where X and Y are Hilbert spaces, A is a linear continuous operator from X into Y , A^{-1} exists but is not continuous, $y \in Y$ is a given element and $x \in X$ is the desired element. Equation (1) is called an operator equation of first kind. V. K. Ivanov (O lineynykh nekorrektnykh zadachakh. DAN SSSR, t. 145, No. 2, str.

Card 1/4

ACCESSION NR: AP4033966

270-272, 1962) proposed looking for a quasisolution of (1) on a compact space instead of its true solution. The point $s_0 \in M$ for which $\|Ax - y_0\|$ attains its minimum on M is such a quasisolution on the given compact set M of the space X for given $y_0 \in Y$. In proving theorems of existence, uniqueness, and continuity of dependence of the quasisolution on y , Ivanov essentially used the continuity of the functional $\|Ax - y\|$ on M . The present author shows that all the classical conditions of proper formulation are preserved for the quasisolution when X is a Hilbert space with a weak topology and A is a linear continuous operator. Theorem 1: Let M be any non-empty convex set, weakly compact in itself, of the space X . Then a quasisolution of (1) on the set M exists for any $y \in Y$ and uniquely and continuously depends on y . More definite results are obtained under the assumption that X is a real separable Hilbert space which coincides with Y , $M = \Omega_R$ is a sphere, $\|x\| \leq R$. Since a sphere in a weakly separable Hilbert space is weakly compact, Theorem 1 is applicable. The author finds a general form for the quasisolution of (1) on the set Ω_R under the assumption that A is a normal operator (an operator which commutes with its conjugate operator A^*), i.e.,

Card 2/4

ACCESSION NR: AP4033966

 $\Lambda\Lambda^* = \Lambda^*\Lambda$. The kernel operator

$$A\varphi = \int k(s-t)\varphi(t) dt. \quad (2)$$

is an example of a normal operator. Let $B = \Lambda\Lambda^* = \Lambda^*\Lambda$. The operator B is self-adjoint and thus has a spectral family of operators E_λ . Let $\Lambda x y = z$,
 $m = \inf (Bx, x)$, $M = \sup (Bx, x)$, $m \geq 0$ since $(Bx, x) = (\Lambda^*\Lambda x, x) = (\Lambda x, \Lambda x) \geq 0$.
 $\|x\| = 1 \quad \|x\| = 1$

Theorem 2: The quasisolution of (1) on Ω_R is expressed by the formula

$$x = \int_m^{M+0} \frac{dE_\lambda y}{\lambda + \mu}, \quad (3)$$

where $\mu = 0$, if

$$\int_m^{M+0} \frac{(dE_\lambda y, y)}{\lambda} < R^2, \quad (4)$$

Card 3/4

ACCESSION NR: AP4033966

 μ is a positive root of the equation

$$\int_{M+0}^{\infty} \frac{\lambda(dE_1 y, y)}{(\lambda + r)^2} = R^2, \quad (5)$$

if

$$\int_{M+0}^{\infty} \frac{(dE_1 y, y)}{\lambda} > R^2. \quad (6)$$

Orig. art. has: 12 formulas.

ASSOCIATION: none

SUBMITTED: 15Apr63

DATE ACQ: 07May64

ENCL: 00

SUB CODE: MA

NO REF Sov: 005

OTHER: 001

Card 4/4

L 36002-66 EWT(d) IJP(c)

ACC NR: AR6004026

SOURCE CODE: UR/0044/65/000/009/B052/B052

24

B

AUTHOR: Dombrovskaya, I. N.

16

TITLE: Approximate solution of Fredholm integral equations of the first kind

SOURCE: Ref. zh. Matematika, Abs. 9B250

REF SOURCE: Matem. zap. Ural'skiy un-t, v. 4, No. 4, 1964, 30-35

TOPIC TAGS: Fredholm equation, integral equation, approximate solution

ABSTRACT: An approximation method is given for finding the quasi-solution of the equation

$$f(x) = \int_a^b K(x, s) \varphi(s) ds \text{ and } f = K\varphi \quad (1)$$

on the space compact $C[a, b]$ by the defining relations

$$|\varphi(x)| < A, |\varphi'(x)| < B, \quad (2)$$

where A and B are given constants. The kernel $K(x, s)$ is regular and closed. The concept of the quasi-solution was introduced by the abstractor (RZhMat, 1963, 3B369): this function $\varphi^0(x)$ belongs to the compact and minimizes the functional

$$\|K\varphi - f\|^2 = \int_a^b \left[\int_a^b K(x, s) \varphi(s) ds - f(x) \right]^2 dx. \quad (3)$$

The quasi-solution coincides with the actual solution if the latter exists and belongs

Card 1/2

UDC: 517.948.32:518

L 36002-66

ACC NR: AR6004026

to the compact. The segment $\overline{[a,b]}$ is divided by the points x_i ($i=0, 1, \dots, m$) into $m=2^n$ equal parts and the integral in (1) is replaced by a sum and the functional (3) by a quadratic function of $\varphi_i = \varphi(x_i)$. The conditions (2) give linear constraints for φ_i , and the calculation of φ_i leads to the problem of quadratic programming. The constructed sequence $\varphi_n^0(x)$ of approximations converges uniformly to the quasi-solution $\varphi^0(x)$. A limit is given, which for a given $\delta > 0$ permits the selection of such an n for which

$$\|K\varphi_n^0 - f\| - \|K\varphi^0 - f\| < \delta.$$

The application of convex programming to the approximate solution of equation (1) under other conditions was given by Douglas (RZhMat, 1962, 3B194). There is a misprint in formula (3). V. K. Ivanov [Translation of abstract]

SUB CODE: 12

Card 2/2 *lll*

DOMBROVSKAYA, I.N.; IVANOV, V.K.

On the theory of certain linear equations in abstract spaces. Sib.
mat. zhur. 6 no.3:499-508 Ny-Je '65.

(MIRA 18:8)

DOMBROVSKAYA, Kh.R.

Some Samaropsis of the Vorkuta series in the Pechora Basin and their
stratigraphic value. Mat.po geol.i pol.iskop.Sev.-Vost.Evrop.chasti
SSSR no.1:90-110 '61. (MIRA 14:11)
(Pechora Basin--Paleontology, Stratigraphic)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5

DOMBROVSKAYA, M.I.

Cytologic diagnosis of cancer of the lungs. Klin.med. 31 no.3:29-32 Mr '53
(MLRA 6:5)

1. Rostovskiy rentgeno-radiologicheskiy i onkologicheskiy institut.
(Lungs--Cancer)

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R000410910010-5"

DOMEROVSKAYA, M.M.

Experimental investigation of deformations of pin joints. Izv.vys.
ucheb.zav.; prib. 3 no.6:127-135 '60. (MIRA 14:1)

I. Severo-zapadnyy zaochnyy politekhnicheskiy institut. Rekomendovana
kafedroy opticheskikh priborov Leningradskogo instituta tochnoy
mekhaniki i optiki.
(Couplings)

DOMBROVSKAYA, M.M.

Experimental investigation of the deformation of ball bearings.
Izv.vys.ucheb.zav.;prib. 4 no.4:109-119 '61. (MIRA 14:9)

1. Severo-zapadnyy politekhnicheskiy institut. Rekomendovana
kafedroy priborov tochnoy mekhaniki i optiki.
(Ball bearings--Testing)

DOMBROVSKAYA, M.M.

Determination of cushion rigidity in a pivot joint. Izv.vys.ucheb.
zav.; prib. 7 no.6:105-111 '64. (MIRA 18:2)

1. Severo-zapadnyy zaochnyy politekhnicheskiy institut. Rekomendo-
vana kafedroy prikrovoy tochnoy mekhaniki.

the
DOMBROVSKAYA, M. P. Cand Med Sci -- (diss) "The functional state of vessels
and kidneys in children during rheumatism." Mos, 1958. 14 pp (Acad Med Sci
USSR. Order of Labor Red Banner Inst of Pediatrics), 200 copies (KL, 52-58, 107)

-186-

DOMBROVSKAYA, M.P.

Renal lesions in rheumatism in children. Pediatriia, Moskva 36 no.8:
28-35 Ag '58.

(MIRA 12:1)

1. Iz. Instituta pediatrii AMN SSSR (dir. i nauchnyy rukovoditel'
- chlen-korrespondent AMN SSSR prof. O.D. Sokolova-Ponomareva).
(RHEUMATISM, in infant and child,
causing kidney dis. (Rus))
(KIDNEY DISEASES, in inf. & child.
caused by rheum. (Rus))

DOMBROVSKAYA, M.P.

State of sodium, potassium and water metabolism in children
in the quiescent phase of the rheumatic process. Vop. okh.
mat. i det. 7 no.5:43-47 My '62. (MIRA 15:6)

1. Iz otsteleniya starshego detskogo vozrasta (zav. - deystvitel'nyy
chlen AMN SSSR prof. O.D. Sokolova-Ponomareva) Instituta
pediatrii AMN SSSR (dir. - dotsent M.Ya. Studenikin).
(SODIUM METABOLISM) (POTASSIUM METABOLISM)
(WATER METABOLISM) (RHEUMATIC FEVER)

CHOMBROVSKAYA, M. V.

The dynamics of carbohydrates in citrus plants under conditions of trench culture. I. A. Vlasko and M. V. Chombovskaya. (Odessa State Univ.). Doblad. Akad. Nauk SSSR, 77, 125-7 (1951).—The total carbohydrate content drops in the beginning of winter (December) in New-Georgian lemon and in Ushhi tangerine; this appears to be the result of decreased amt. of light in the trench during this period. The Meyer lemon and Washington navel orange maintain a high level of carbohydrates, owing to their lack of sensitivity to shade. The total carbohydrates in the leaves of 1st and 2nd new shoots (in all the plants) which develop in the shade remain const. over January-March as long as the temp. is rather const. and low (1-3°). At higher temp. (4-26°) the New-Georgian lemon and Eureka lemon show a 30% decline in total carbohydrates from February to April and some 28-30% of the no. of leaves are shed in this period. The results show that under production conditions it is satisfactory to cover the plant trenches with opaque material without visible harm to the plants during the winter months. G. M. K.

Doklady Akad. Nauk SSSR 17 V
VLAZENKO, I.A.; DOMEROVSKAYA, M.V.

Effect of prolonged exposure to darkness on chlorophyll content in citrus in trench culture. Doklady Akad. nauk SSSR 82 no.3:465-468
21 Jan 52. (CIML 21:5)

1. Presented by Academician A.Ye. Arbusov 21 November 1951.

USSR / Cultivated Plants. Grains.

M-3

Abs Jour: Ref Zhur-Biol., 1958, No 16, 72927.

Author : Dombrovskaya, M. V.; Shpakova, B. M.

Inst : Odessa University.

Title : Increase in Harvest Yield of Corn by Means of
Additional Carbon Feeding Through the Roots.

Orig Pub: Nauchn. yezhegodnik, Odessk. un-t, 1956, Odessa,
1957, 202-203.

Abstract: No abstract.

Card 1/1

DOMBROVSKAYA, M., kandidat ekonomicheskikh nauk.

Indices of the extent of prefabrication possibilities in construction. Gor. i sel', stroi. no.2:15-16 P '57. (MLPA 10:6)
(Precast concrete construction)

~~DOMBROVSKAYA, M.Ye.~~, kandidat ekonomicheskikh nauk

New method of determining the degree of prefabrication in a
construction project. Stroi. prom. 33 no.4:23-26 Ap '55.
(Building) (MLRA 8:6)

ACC NR: AP6035877 (A,N) SOURCE CODE: UR/0413/66/000/020/0103/0103

AUTHOR: Torban, M. A.; Beylinson, A. V.; Dombrovskaya, N. L.; Makarova, V. R.

ORG: none

TITLE: Method of obtaining pseudocholinesterases. Class 30, No. 187238

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 103

TOPIC TAGS: cholinesterase, pseudocholinesterase, chemical synthesis

ABSTRACT: An Author Certificate has been issued for a method of obtaining pseudocholinesterases by salting out ammonium sulfate. To reduce costs and to increase the purity of the material, the by-products of serum production are treated with heavy-metal salts and ammonium sulfate. [WA-50]

SUB CODE: 07/ SUBM DATE: 07Jul62

ACC NR: AP6035877 (A,V) SOURCE CODE: UR/0413/66/000/020/0103/0103

AUTHOR: Toxban, M. A.; Beylinson, A. V.; Dombrovskaya, N. L.; Makarova, V. R.

ORG: none

TITLE: Method of obtaining pseudocholinesterases. Class 30, No. 187238

SOURCE: Izobreteniya, promyshlennyye obruztsy, tovarnyye znaki, no. 20, 1966, 103

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SUB CODE: 07/ SUBM DATE: 07Jul62

Card 1/1

UDC: 615.45:615.779.94

DOMBROVSKAYA, Nina Maksimovna. Prinimal uchastiye NIKOL'SKIY, V.V.,
kand. tekhn.nauk, dots.; LYAPKINA, T.G., red.; VORONINA,
R.K., tekhn. red.

[Radio engineering reader in German]Khrestomatiia po radio-
tekhnike na nemetskom iazyke; posobie dlja studentov, izu-
chaiushchikh inostrannyi iazyk. Moskva, Vysshiaia shkola,
1961. 74 p. (MIRA 15:11)

(Radio)

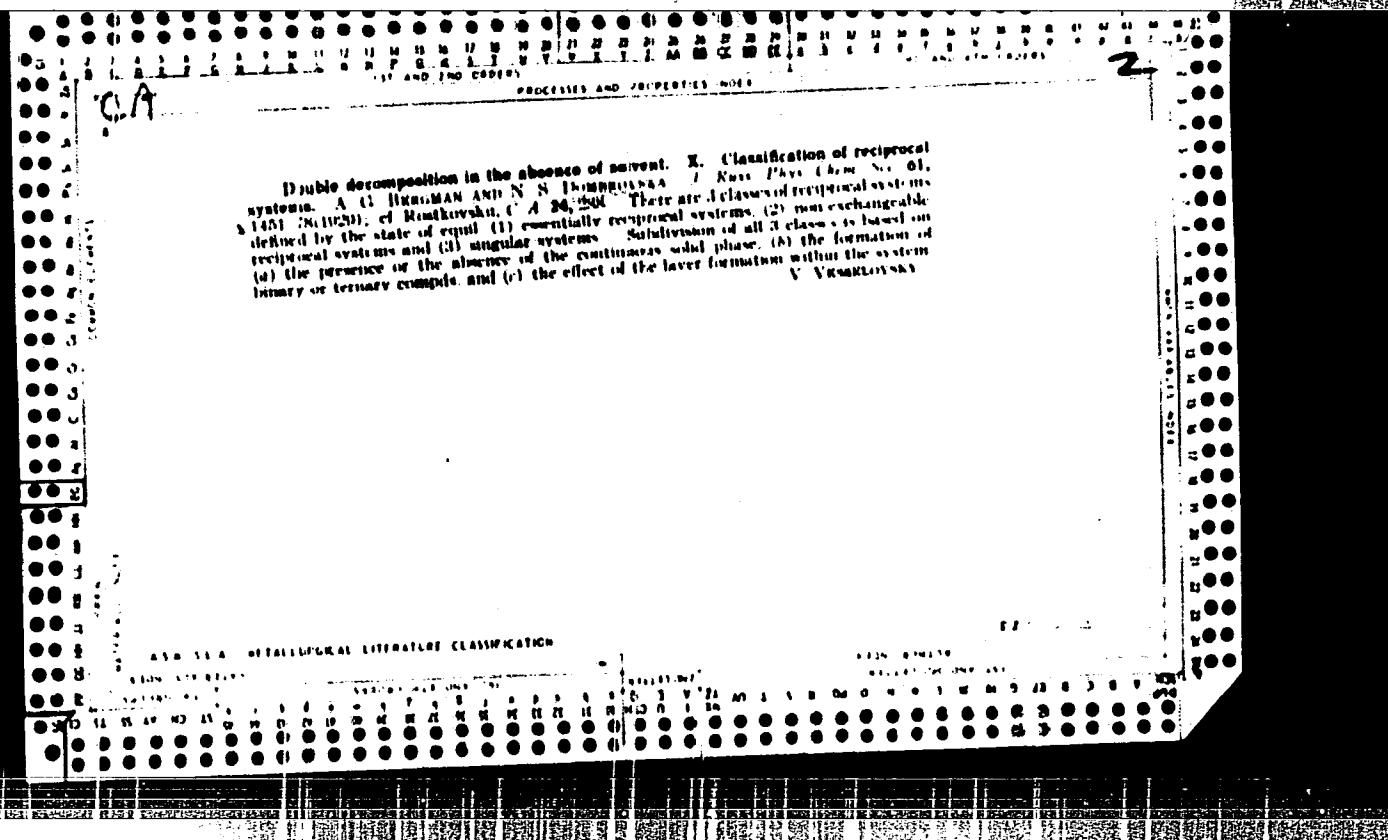
Chemical composition of the Darassun mineral water. N. S. TAKHOOVSKAYA AND
V. P. YUSHKEVICH. *Mem. Ussr. Extreme-Orient* 4, 19 (1937) (Chim. Zentral
1931, 11, 881). - The dried residue from the Darassun spring water contains on an av
21.01% Ca, 7.02% Mg, 0.27% sulfate and 0.31% Cl. M. G. Moore

14

Quaternary system: $K_2O-Na_2O-H_2O-Cl-H_2O$. V. I. NIKOLAEV AND N. S. DODONOV-SKAYA. *J. Russ. Phys. Chem. Soc.*, 61, 1251-7 (1929); cf. C. A. 22, 3990. KOH was substituted for NaOH in the system: $Na_2O-Na_2O-HCl-H_2O$ previously studied. The combined solv. of KCl and KNO_3 under both isothermal and polythermic conditions, in neutral, basic and acidic salts, was investigated. The influence of added one of the salts on the solv. of the other (at 25°) was also observed. Under polythermic conditions in the system $KCl-KNO_3-H_2O$, there is more KCl than KNO_3 in soln. at temps. up to 80°, while above 80°, after an equalization in distribution of KOH between both acids is attained, HNO_3 begins gradually to predominate. Under isothermal conditions with an increasing amt. of KOH in soln. (or sum of HCl and HNO_3), HNO_3 tends to preponderate slightly, but not less than 37.72% by wt. of free KOH is required to attain equalization in distribution of the base between the acids, whereupon HNO_3 preponderates decidedly. In the acidic salts, the content of HNO_3 (free and combined) must be greater than 20.00% before the preponderance of HNO_3 can be ascertained. Thus the contest between HNO_3 and HCl for the base is impeded by substitution of KOH for NaOH, requiring higher temps. and concns. of free acids, or the base, in order to attain finally the equality in distribution, and then a preponderance on the side of HNO_3 .

CHAR BLANC

APPENDIX METALLURGICAL LITERATURE CLASSIFICATION



bc

11

Doubtless desorption occurs in the absence of a solvent. XVI. Ag_2MnO_4 [KUMAMOTO AND J. (Jpn. Chem. Soc., 1933, 56, 361-364)]. Compound formation is absent in the systems $\text{AgBr}-\text{Ag}_2\text{NO}_4$ and $\text{TiBr}_3-\text{TiBr}$, whilst the fusion diagram of the system $\text{TiBr}_3-\text{AgBr}$ indicates the formation of a compound, TiBr_3AgBr , transition point 298° at 80 mol.-% TiBr . Owing to the positive heat effect (+9.55 kg.-cal.), the equilibration in the reaction $\text{Ag}_2\text{MnO}_4 + \text{TiBr}_3 \rightleftharpoons 2\text{AgBr} + \text{TiMnO}_4$ is displaced to the right. The fusion diagrams for the systems $\text{TiMnO}_4-\text{AgBr}-\text{TiBr}$ and $\text{TiMnO}_4-\text{Ag}_2\text{MnO}_4-\text{Ag}_2\text{NO}_4$, and for the quaternary systems $\text{Ag}_2\text{NO}_4-\text{TiBr}-\text{AgBr}-\text{TiMnO}_4$ have been determined.

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION												627-112-1211
ISSN 1718-3349												
JOURNAL OF METALS												
VOLUME 33 NUMBER 10 OCTOBER 1981												
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C A

111 app. reg. 000001

100 AND 101 copies

2

PROCESSES AND PROPERTIES INDEX

Double decomposition in the absence of a solvent. XVII. Reciprocal systems with a single surface of crystals. A. G. Bergman and N. B. Dombrovskaya. *J. Russ. Chem. (U. S. S. R.)* 3, 729-34 (1933); cf. *C. A.* 24, 2367; 26, 2220. — Possible variations in the form of crystal surfaces in various combinations of continuous solid solns. of binary systems entering the compn. of the reciprocal system are discussed. For systems with a single surface interpretation is difficult, but in the case of division of the crystal surface within the reciprocal system into sep. planes of crystals, caused by disintegration of the solid saline, or complex formation, all the interrelations become more simple. Examples of a system with a single surface are: $\text{AgCl} + \text{NaBr} \rightleftharpoons \text{AgBr} + \text{NaCl}$; $\text{NaCl} + \text{KBr} \rightleftharpoons \text{NaBr} + \text{KCl}$ and $\text{NaI} + \text{KI} \rightleftharpoons \text{NaI} + \text{KBr}$. The last 2 systems have on all 4 sides continuous solid saline, with minima, because of which with the complete reversibility of the reciprocal pair, the crystal surfaces of these systems have a cup-like form. XVIII. Reciprocal systems with a single surface of crystallization. $\text{AgCl} + \text{NaBr} \rightleftharpoons \text{AgBr} + \text{NaCl}$. N. B. Dombrovskaya. *Ibid.* 735-41. — The reciprocal system $\text{AgCl} + \text{NaBr}$ to $\text{AgBr} + \text{NaCl}$ is the first one investigated in which there are a single crystal plane and 4 binary units forming continuous solid saline, and sep., in the form of amorphous crystals. According to the thermal effect (5.1 Cal.) and the curvature of the isotherms, the stable pair is $\text{AgBr} + \text{NaCl}$. Within the system is observed the isothermal curvature, causing "inflow" on the crystal surface as a result of the lowered

reciprocal solv. of the components of the stable pair. The incongruence of the "inflow" with the plane of the stable diagonal cut of $\text{AgBr}-\text{NaCl}$ is the analog of the ridge shift of the crystal surfaces of the stable components, appearing in many irreversible-reciprocal systems, e.g. $\text{AgBr}_2 + 2\text{TlNO}_3 \rightleftharpoons 2\text{AgNO}_3 + \text{Tl}_2\text{Br}_3$; $\text{AgNO}_3 + \text{Tl}_2\text{Br}_3 \rightleftharpoons \text{AgBr}_2 + 2\text{TlNO}_3$; $\text{AgNO}_3 + \text{Tl}_2\text{Br}_3 \rightleftharpoons \text{AgBr}_2 + \text{Tl}_2\text{K}_3$; $\text{NaNO}_3 + \text{MgCl}_2 \rightleftharpoons 2\text{NaCl} + \text{MgNO}_3$. In such systems the shift of the max. from the plane of the stable cut indicates mass decompos. in the fused state. XX. Reciprocal system: $\text{NaI} + \text{KBr} \rightleftharpoons \text{NaBr} + \text{KI}$. A. P. Obukhov. *Ibid.* 737-91. — The crystal surface of the reciprocal system represents one continuous surface shaped like a flat cup with 2 raised edges adjacent to the side binary systems, and is related in its external characteristics to the first type of the first class in the classification of B. and D. In the system $\text{NaBr} + \text{AgCl} \rightleftharpoons \text{AgBr} + \text{NaCl}$, consisting of continuous solid solns., of which $\text{NaBr} + \text{NaCl}$ and $\text{AgBr} + \text{AgCl}$ have a min., while $\text{AgBr} + \text{NaBr}$ and $\text{AgCl} + \text{NaCl}$ have not, there was observed a shift of the reaction toward a more stable pair of $\text{NaCl} + \text{AgBr}$, which is related to the thermochim. reaction effect of 5.1 (cf. B. and Palkin, *Zhob. otschekop.*, *spiss.* 7, No. 7, 199-9; 213-7, figs. 13, 16, 17 and 19). XX. Melting-point diagrams of the ternary systems: $\text{NaCl}-\text{NaBr}-\text{NaI}$ and $\text{KCl}-\text{KBr}-\text{KI}$. V. P. Radushchev. *Ibid.* 843-51. — The fusion diagrams of the 2 systems showed a close resemblance. The surface liquidus (Jänecke, *C. A.* 4, 705) of both systems represents 1 crystal plane of the ternary solid saline, which near the binary system of chloride-iodide is split into 2

ASS-51A METALLURGICAL LITERATURE CLASSIFICATION

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14005 143-144

14006 145-146

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14009 151-152

14010 153-154

14011 155-156

14012 157-158

14013 159-160

14014 161-162

14015 163-164

14016 165-166

14017 167-168

14018 169-170

14019 171-172

14020 173-174

14021 175-176

14022 177-178

14023 179-180

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14127 387-388

14128 389-390

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14132 397-398

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14004 141-142

14005 143-144

14006 145-146

14007 147-148

14008 149-150

14009 151-152

14010 153-154

14011 155-156

14012 157-158

14013 159-160

14014 161-162

14015 163-164

14016 165-166

14017 167-168

14018 169-170

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14041 215-216

14042 217-218

14043 219-220

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14047 227-228

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14067 267-268

14068 269-270

14069 271-272

14070 273-274

14071 275-276

14072 277-278

14073 279-280

14074 281-282

14075 283-284

14076 285-286

14077 287-288

14078 289-290

14079 291-292

14080 293-294

14081 295-296

14082 297-298

14083 299-300

14084 301-302

14085 303-304

14086 305-306

14087 307-308

14088 309-310

14089 311-312

14090 313-314

14091 315-316

14092 317-318

14093 319-320

14094 321-322

14095 323-324

14096 325-326

14097 327-328

14098 329-330

14099 331-332

14100 333-334

phases of limited ternary solid saline. The curve of the joint crystal, of the II blends of limited ternary solid saline, beginning in the eutectic p. of the binary system of chloride-iodide is terminated within the system at higher temp., and, therefore, shows an upward course. According to the classification of Jancke the 2 systems must be related to the 2nd type of systems with ternary solid saline, and a system of limited solid saline, taking its origin from the binary system with invariant point. The system of the K salts has a flatter crystal surface than that of the Na salts. The curve of joint crystal, of the 2 solid phases in the I₂ system is shorter than in the 2nd. These facts indicate a more complete immiscibility and a greater stability of the solid saline, in the systems of K salts than in that of Na salts. XII. Irreversible-reciprocal system:
 $2KCl + K_2CO_3 \rightarrow 2KCl + Na_2CO_3$. Ibid. XI 2 G4. The

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diagram of the reciprocal system obtained by thermal analysis discloses a shift of the reaction in the direction of formation of $2\text{KCl} + \text{Na}_2\text{CO}_3$, which agrees with the pos. thermal effect of the formation of this pair of salts (7.3 cal. or 3.65 cal. based on the equiv.) The system must be related to the class of the irreversible-reciprocal systems of the classification of B. and D. The decompr. of the continuous solid solns. of the binary systems (K_2Cl_2 - Na_2Cl_2 and K_2CO_3 - Na_2CO_3) on adding a 3rd component was observed only for the chlorides. The solid solns. of the carbonates are stable also within the reciprocal system. The surface liquids of the system is formed by only 3 fields: K_2Cl_2 , Na_2Cl_2 and the solid solns. of K_2CO_3 - Na_2CO_3 . Of the ternary systems, into which the investigated system is decomprd. at the stable diagonal cut, one represents the ternary eutectic (Na_2Cl_2 - K_2Cl_2 - Na_2CO_3), and the other a system with continuous solid solns. of 2 components in which the 3rd does not dissolve (K_2Cl_2 - K_2CO_3 - Na_2CO_3). XIII. Irreversible reciprocal systems: $\text{K}_2\text{SO}_4 + \text{Li}_2\text{Cl}_2 \rightarrow \text{K}_2\text{Cl}_2 + \text{Li}_2\text{SO}_4$. O.S. Dombrovskaya. Ibid. 1007-16.-This system is irreversible-reciprocal with the equil. shifted

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A5-514 METALLURGICAL LITERATURE CLASSIFICATION

in the direction of the stable pair $K_2SO_4 + K_2Cl_2$, which is also indicated by the thermal coeff. of decompr. (+6.4 Cal.) The 2 decompn. products are sepd. at the metastable diagonal cut. Characteristic is the deflection of both ridges of the stable components from the planes of the stable diagonal cut. XXXIII. Reciprocal systems: $Cs_2 - Cl_2 + K_2SO_4 \rightleftharpoons Rb_2SO_4 + K_2Cl_2$. Ibid. 1017-25.-The 2 systems supplement the series of reciprocal systems, in which pairwise simple eutectics, viz. $Ag_2Cl_1 + HgBr_2 \rightleftharpoons Ag_2Br_1 + MgCl_2$; $AgCl_1 + KBr \rightleftharpoons AgBr + KCl$; $AgBr + KI \rightleftharpoons AgI + KBr$ and $Ag_2SO_4 + Na_2Cl_2 \rightleftharpoons Ag_2Cl_2 + Na_2SO_4$ (Bergman and Falkin, loc. cit.). While the investigated systems together with the system $Ag_2Cl_1 + HgBr_2$ belong to the series of reciprocal systems, the system $AgCl_1 + KBr \rightleftharpoons AgBr + KCl$ is a transition to the continuous system, the representative of which for the given type of systems is the system: $AgBr + KI \rightleftharpoons AgI + LBr$. The system $Rb_2Cl_2 + K_2SO_4 \rightleftharpoons Rb_2SO_4 + K_2Cl_2$ represents the 1st subtype of the system with 2 surfaces, the eutectic line of which has no min. In the system: $Cs_2Cl_2 + K_2SO_4 \rightleftharpoons K_2Cl_2 + Cs_2SO_4$, because of the considerable thermal reaction effect and the lower isomorphism than in the Li-Rb system, there is a very deep min. on the eutectic line, and also some shift of the decompr. reaction toward the somewhat more stable diagonal pair $Cs_2Cl_2-K_2SO_4$, which is shown by a corresponding curvature on the isotherms of the plane of isomorphic sulfates. Such a curvature of isotherms is not observed in the system: $Rb_2SO_4 + K_2Cl_2$ cont.-

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continued.

K₂SO₄ + Rb₂Cl₂. XXIV. Irreversible-reciprocal system:sodium chloride-lithium sulfate. M.A. Klochko, Itdd. 1026-39.-The surfaces of solidification and the diagrams of side binary systems of the reciprocal system: Li₂Cl₁ + Na₂SO₄ → Li₂SO₄ + Na₂Cl₁ were detd. The diagram of "com-pn.-temp. of m." of the binary system LiCl-Li₂SO₄ is given for the first time. The directions of reaction and the character of double decompr. in the system were detd. An investigation must be made of the reciprocal systems between the m.p. of each compn. and abs. o to obtain a clear conception of transformations proceeding in the system at all temps. during its stable existence.

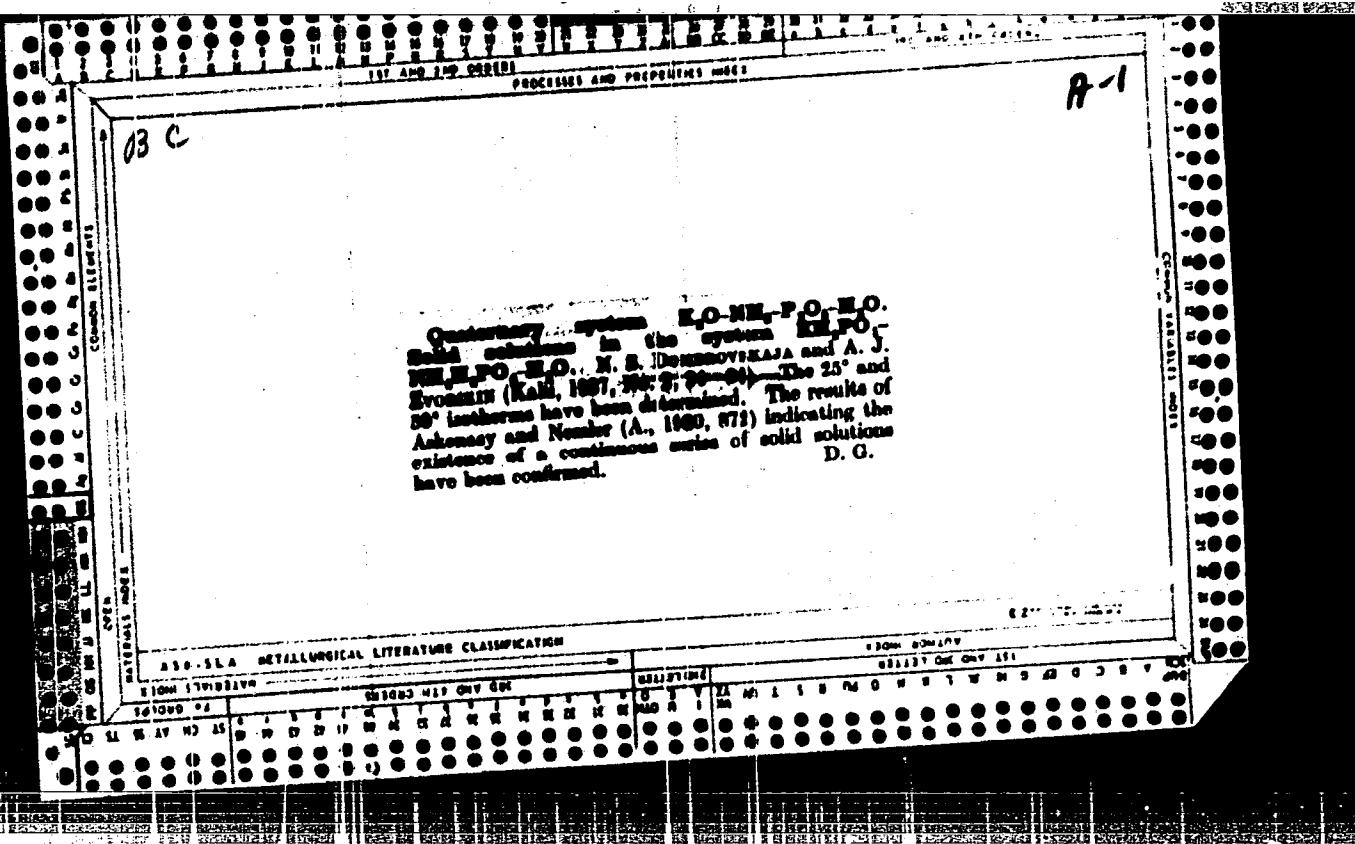
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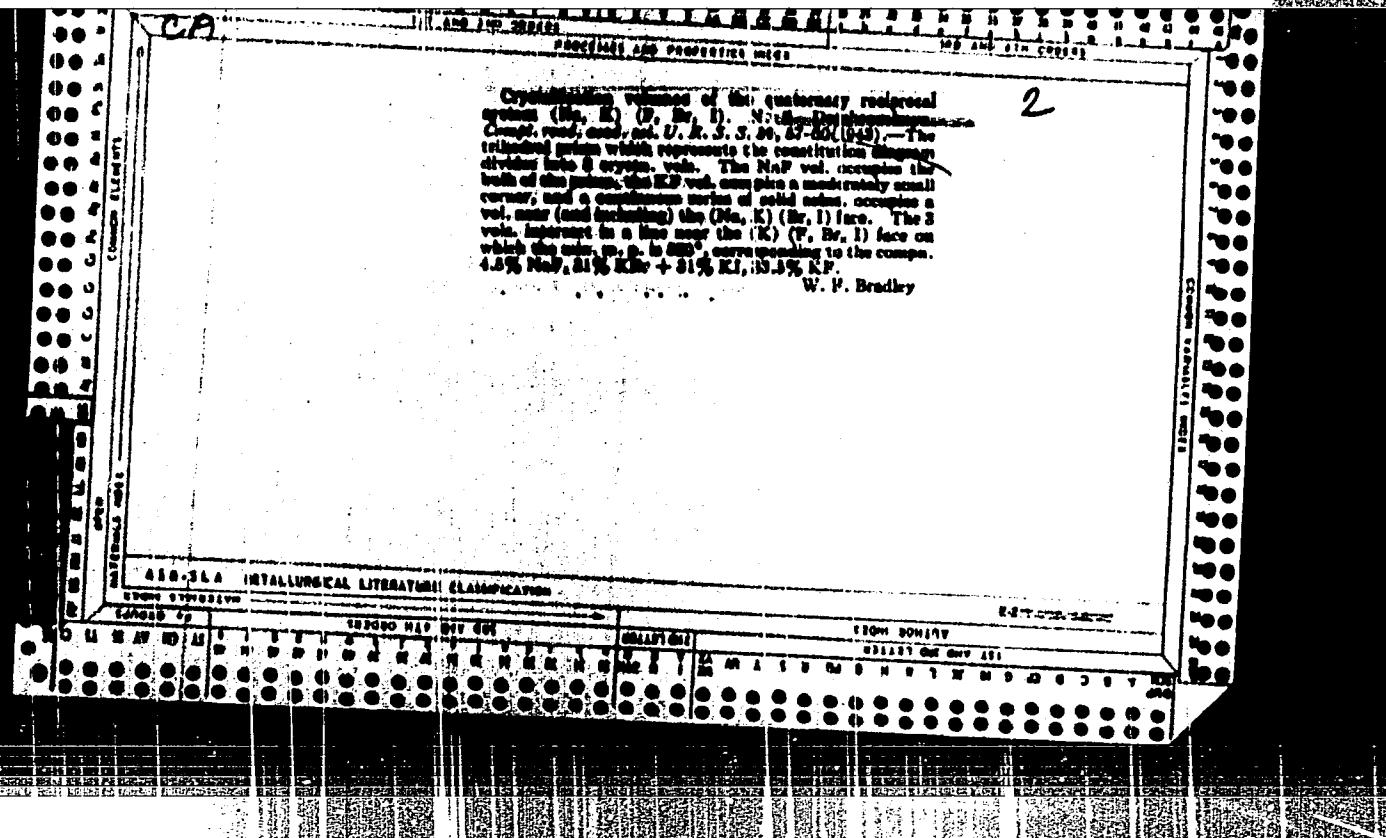
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Double decomposing in the absence of a solvent
XXXII. Multicomponent reciprocal systems. A. G.
Bergman and N. B. Dombrovskaya. *Bull. acad. sci.
U. R. S. S., Class sci. math. nat. Nauk. chim.* 1936, 133 81
(in German 1937); cf. *C. A.* 30, 7879¹. The present in-
vestigation completes the first general characterization
of complex reciprocal systems of any order. Tabulated
data are presented for the compn. diagrams of reciprocal
systems that have 4-11 ions, inclusive. From these
tables the general relations for more complex reciprocal
systems can be readily deduced. With the exception of
certain categories of combinations within the higher
orders (beginning with the sixth), the internal structures
of which have not yet been completely elucidated, all of
the remaining moments of complex reciprocal systems are
presented in the form of extremely simple rules. The
division of complex diagrams into stable complexes on the
basis of the relative heats of formation of the salts greatly
simplifies the study. Reciprocal systems experimentally
studied include: Na, Li, Cl, NO₃, SO₄; Na, K, Mg, Cl,
SO₄; Na, K, P, Cl, Br, I; Na, K, Li, Cl, NO₃, SO₄.
¹ Double complex of quinary reciprocal systems
from nine salts. V. P. Radishchev. *Ibid.* 153 80 (in
German 1937-42).—A continuation of previous work (cf.
C. A. 30, 7879).

John E. Lyle



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<p>Double decomposition in the binary system of a solvent.</p> <p>XXXVI. Irreversible reciprocal system of sodium and potassium fluorides and bromides. N. N. Dombrowskaya and Z. A. Kuklochova. <i>Ann. soviet. fiz.-chim.</i>, <i>Inst. chim. gis. (U. S. S. R.)</i> 10, 211-26 (1938); cf. C. A. 31, 1089. —The irreversible reciprocal system $KF + NaBr$ et $NaF + KBr$ was studied (cf. Bergman and D. C. A. M., 1939). According to the thermochim. reaction effect equal to 11.6 kca./mol. the equil. is shifted toward the side $NaF + KBr$. By means of stable diagonal section of $NaF + KBr$, representing a simple eutectic system, the square of the system (obtained by projecting the crystal surface on the prime base, representing the property diagram of the system) is divided into 2 independent ternary systems: (1) $NaF + KBr + KP$ with 1 ternary eutectic point at 870° and 7.8% $NaF + 84\%$ $KBr + 8.2\% KP$, and (2) $NaF + KBr + NaBr$ with 2 fields: (1) NaF and (2) solid saline. of bromides. A considerable no. of sections in this region showed that the line of mutual crystal. divides these fields in the form of a very oblique curve with a min. at 881° and the compn. 16.5% NaF, 39.5% KBr and 44% $NaBr$. The space diagram shows the presence of 3 fields of crystall.: 1 field of continuous solid saline, and 2 fields of the components NaF and KP. The crystal. vol. of the solid phases are in accord with the direction of the reaction of double de-</p> <p style="text-align: right;">Chas. Blanc</p>																																																																																																																																																																																																																																																																																																											
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Topological properties of a chemical equilibrium diagram.
I. N. N. Dombrovskaya, *Izvest. Sibirsk. Fiz.-Khim. Anal.*, *Izdat. Otdeleniya Nauq. Khim., Akad. Nauk S.S.R.*,
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diagrams and cryst. trees of binary, ternary, quaternary,
quinary, and polycOMPONENT systems. M. Hesch

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Topology of multicomponent systems. N. S. Dombrovskaya. (N. N. Kurnakov Inst. of Gen. and Inorg. Chem., Acad. Sci. Ukr. SSR). Izv. Akad. Nauk Ukr. SSR, Khim. Nauki, 1981, No. 1 (Bish. i Neur. Akad. Nauk SSSR), 19, 113-12 (1981).—Theoretical. In multicomponent systems where the components form chem. compds., the compd. diagram is subdivided into simpler forms by means of: section (binary system), triangulation (ternary), tetrahedron (quaternary), or subdivision of a pentatop (5-component system). The second figure resulting in the subdivision of an equil. diagram is referred to (Kurnakov, C.A. 80, 16811) as "singular star." The singular star of multicomponent systems is discussed. In a ternary system it is a point, in a quaternary system it is a 3-dimensional figure, and in a 5-component syst. it is a 4-dimensional (a purely math. concept) figure. The various types of singular stars are discussed and classified. The type and construction of crystal "trees" (Cayley, Phil. Mag. 10, 374 (1859); cf. C.A. 81, 1680) for multicomponent regular systems is outlined.

Polythermal diagram of the quaternary reciprocal system
Na, KF, Br, I. N. S. Domirovskaya. Izvest. Sektora
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--The diagram representing the 6-salt reciprocal system is
a prism having 6 facets formed by the individual salts;
9 edges formed by the binary component systems NaF-NaI,
NaF-NaBr, NaF-KF, NaBr-NaI, NaBr-KBr, NaI-KI,
KF-KBr, KF-KI, and KBr-KI; 3 square sides formed by
ternary reciprocal systems $\text{NaBr} + \text{KF} \rightleftharpoons \text{NaF} + \text{KBr}$,
 $\text{NaI} + \text{KF} \rightleftharpoons \text{NaF} + \text{KI}$, and $\text{NaI} + \text{KBr} \rightleftharpoons \text{NaBr} + \text{KI}$; and 2 triangles (top and base of prism) representing the
simple ternary systems NaF-NaBr-NaI and KF-KBr-KI.
The inside of the prism is taken up by the complex system of
6 salts. The reciprocal reaction within this system pro-
ceeds according to $\text{NaBr} + \text{NaI} + 2\text{KF} \rightleftharpoons \text{KBr} + \text{KI} +$
 2NaF . On the spatial diagram of this system there are 3
cryst. spaces, the largest of which is occupied by NaF.
The others are KBr and KI. The space taken up by solid
solns. of Na, K||Br, I is relatively small. The shape of
the KF isotherm indicates the metastable nature of this
salt. The spatial diagram has 3 kinds of boundary areas
when 2 solid phases exist. On one of these is located NaF
and continuous solid solns. of Na, K||Br, I. This area has
a min. at 522° at which the compn. is NaF 6, KBr 10.8,
KI 26.2, NaBr 17, and NaI 41%. The other area is oc-
cupied by solid NaF and KF. On the 3rd area are located
KF and continuous solid solns. of Na, K||Br, I. On one
boundary curve co-exist 3 solid phases: NaF, KF, and con-
tinuous solid solns. This curve has a min. at 520° at
which the compn. is: NaF 4.6, KBr 31, KI 31, and KF
33.5%. The stable ternary system NaF-KBr-KI divides
the prism into a tetrahedron of NaF-KF-KBr-KI and a
pyramidal NaF-NaBr-NaI-KBr-KI. M. Hesch

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Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 12654

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Title : Thermographic Investigation of Acid-Resistant Cements

Orig Pub : Zh. prikl. khimii, 1953, No 1, 18-21

Abstract : No abstract.

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Akademii nauk SSSR. (Kara-Bogaz-Gol (Gulf)--Saline waters)
(Saline waters--Kara-Bogaz-Gol (Gulf))